

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (canceled).

2. (currently amended): A quantitative suction tip to be attached on a tip of a suction nozzle for the suction of a liquid, comprising:

a fixed volume chamber with a predetermined volume and having a suction opening provided at a lower end thereof and a length perpendicular to the suction opening; and

a through hole provided in a division wall formed at an upper end of said fixed volume chamber, said through hole having a smaller cross-sectional area than that of said fixed volume chamber,

wherein a cross-sectional area of said suction opening is equal to a cross-sectional area of said fixed volume chamber at a position where said suction opening contacts said fixed volume chamber,

wherein the cross-sectional area of said fixed volume chamber is constant throughout the length of said fixed volume chamber~~A quantitative suction tip according to Claim 1, and~~

~~-wherein a fitting portion is formed on said fixed volume chamber for fitting with a~~
periphery of the tip of said suction nozzle.

3. (currently amended): TheA quantitative suction tip according to Claim 2, wherein said fixed volume chamber and said fitting portion are components configured to separately formed and ~~then be~~ engagingly combinable to form a unit.

4. (currently amended): A quantitative suction tip to be attached on a tip of a suction nozzle for the suction of a liquid, comprising:

a fixed volume chamber with a predetermined volume and having a suction opening provided at a lower end thereof and a length perpendicular to the suction opening; and

a through hole provided in a division wall formed at an upper end of said fixed volume chamber, said through hole having a smaller cross-sectional area than that of said fixed volume chamber,

wherein a cross-sectional area of said suction opening is equal to a cross-sectional area of said fixed volume chamber at a position where said suction opening contacts said fixed volume chamber,

wherein the cross-sectional area of said fixed volume chamber is constant throughout the length of said fixed volume chamber, and~~A quantitative suction tip according to Claim 1,~~

wherein an engaging portion is formed over said through hole of said fixed volume chamber to engage the tip of said suction nozzle.

5. (currently amended): A quantitative suction apparatus using the quantitative suction tip according to Claim 2~~1~~, comprising:

a suction pump connected to said suction nozzle, for drawing a liquid into said fixed volume chamber by causing a suction pressure to exist in said fixed volume chamber of said quantitative suction tip; and

a control unit connected to said suction nozzle and said suction pump, for detecting the suction pressure and terminating a suction operation by said suction pump upon detection of a change in the suction pressure indicating that the liquid has filled said fixed volume chamber and therefore has reached said through hole.

6. (currently amended): The quantitative suction ~~tip~~apparatus according to claim ~~2~~1, wherein a difference in the cross-sectional area of said through hole and said fixed volume chamber is set such that a pressure change can be obtained for a given detection sensitivity.

7. (currently amended): The quantitative suction ~~tip~~apparatus according to claim ~~1~~2, wherein said fixed volume chamber is made detachable for replacement and to accommodate different volumes of liquid.

8. (currently amended): The quantitative suction ~~tip~~apparatus according to claim ~~1~~2, wherein said fixed volume chamber is provided at a lower end of said quantitative suction tip.

9. (new): The quantitative suction tip according to claim 3, wherein a difference in the cross-sectional area of said through hole and said fixed volume chamber is set such that a pressure change can be obtained for a given detection sensitivity.

10. (new): The quantitative suction tip according to claim 3, wherein said fixed volume chamber is made detachable for replacement and to accommodate different volumes of liquid.

11. (new): The quantitative suction tip according to claim 3, wherein said fixed volume chamber is provided at a lower end of said quantitative suction tip.

12. (new): The quantitative suction tip according to claim 4, wherein a difference in the cross-sectional area of said through hole and said fixed volume chamber is set such that a pressure change can be obtained for a given detection sensitivity.

13. (new): The quantitative suction tip according to claim 4, wherein said fixed volume chamber is made detachable for replacement and to accommodate different volumes of liquid.

14. (new): The quantitative suction tip according to claim 4, wherein said fixed volume chamber is provided at a lower end of said quantitative suction tip.

15 (new): A quantitative suction apparatus using the quantitative suction tip according to Claim 4, comprising:

a suction pump connected to said suction nozzle, for drawing a liquid into said fixed volume chamber by causing a suction pressure to exist in said fixed volume chamber of said quantitative suction tip; and

a control unit connected to said suction nozzle and said suction pump, for detecting the suction pressure and terminating a suction operation by said suction pump upon detection of a change in the suction pressure indicating that the liquid has filled said fixed volume chamber and therefore has reached said through hole.